

PIEZO ACTUATOR COMPRISING A STRUCTURED EXTERNAL ELECTRODE

TECHNICAL FIELD

This patent application describes an electrical multi-layer component, in particular
5 a piezo actuator. This patent application also describes a method for producing such an
electrical multi-layer component.

BACKGROUND

Piezo actuators are known that have a base body, with a stack of stratified ceramic
10 layers, and internal electrodes lying between them. The internal electrodes are made
from a mixture of silver and palladium. The ceramic layers contain a ceramic based on
lead zirconium titanate, which has a piezoelectric effect because of its ferroelectric
properties. Because of the piezoelectric effect, the ceramic expands when electrical
potential is present, so that it is possible to make actuators from such a multi-layer
15 ceramic.

Also present in the known piezo actuators are outer electrodes, which are applied
continuously to one lateral face of the base body and contact the internal electrodes.

20 In order to reduce the costs of producing the piezo actuators, an effort is made to
replace the material of the internal electrodes and the material of the outer electrode with
copper. In known piezo actuators, the outer electrode has the form of a continuous layer.

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